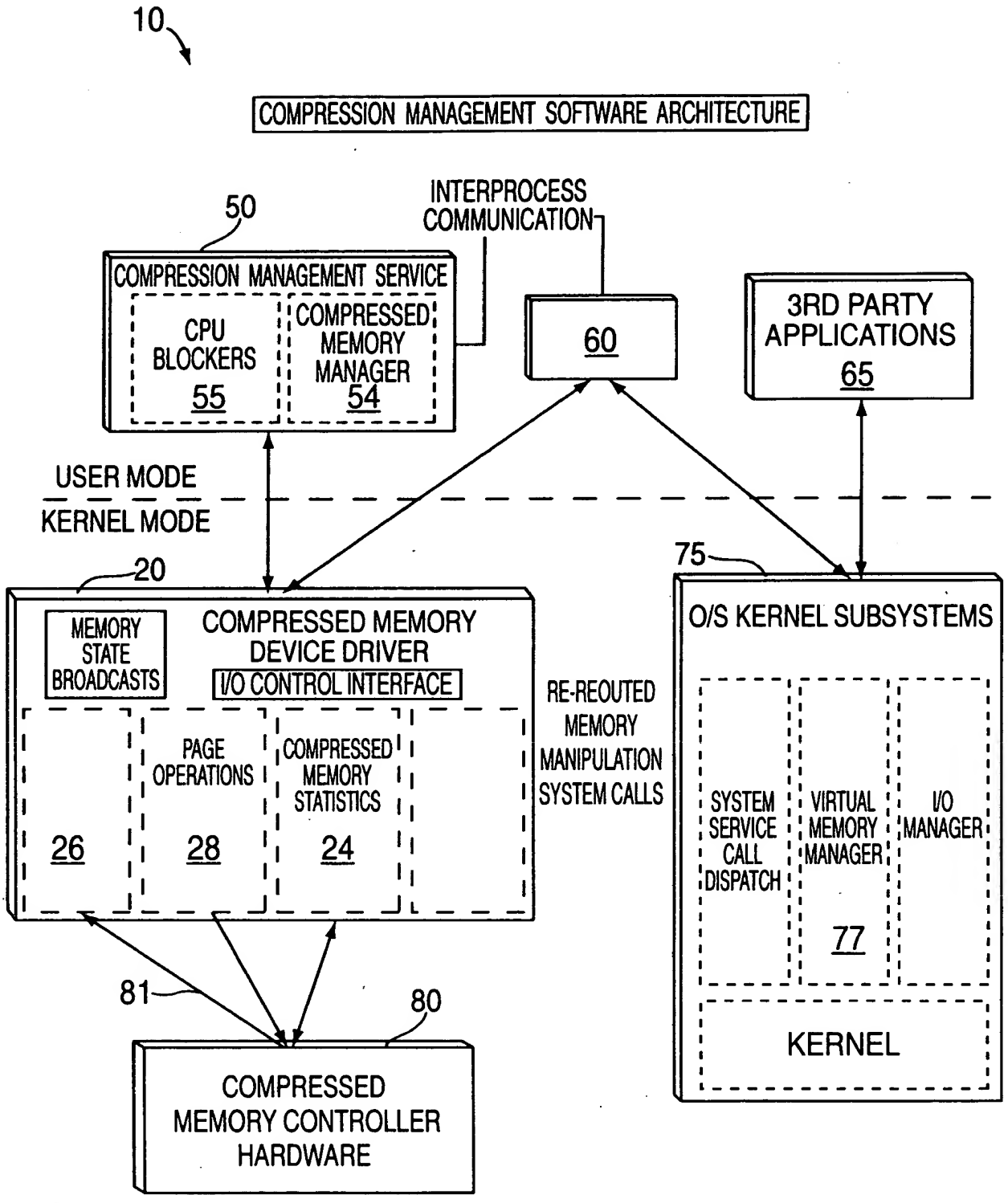
10
COMPRESSION MANAGEMENT SOFTWARE ARCHITECTURE
50
INTERPROCESS COMMUNICATION
COMPRESSION MANAGEMENT SERVICE
CPU BLOCKERS
55
COMPRESSED MEMORY MANAGER
54
60
3RD PARTY APPLICATIONS
65
USER MODE
KERNEL MODE
20
75
MEMORY STATE BROADCASTS
COMPRESSED MEMORY DEVICE DRIVER
I/O CONTROL INTERFACE
PAGE OPERATIONS
COMPRESSED MEMORY STATISTICS
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28
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RE-REOUTED MEMORY MANIPULATION SYSTEM CALLS
O/S KERNEL SUBSYSTEMS
SYSTEM SERVICE CALL DISPATCH
VIRTUAL MEMORY MANAGER
77
I/O MANAGER
KERNEL
81
80
COMPRESSED MEMORY CONTROLLER HARDWARE

FIG. 1

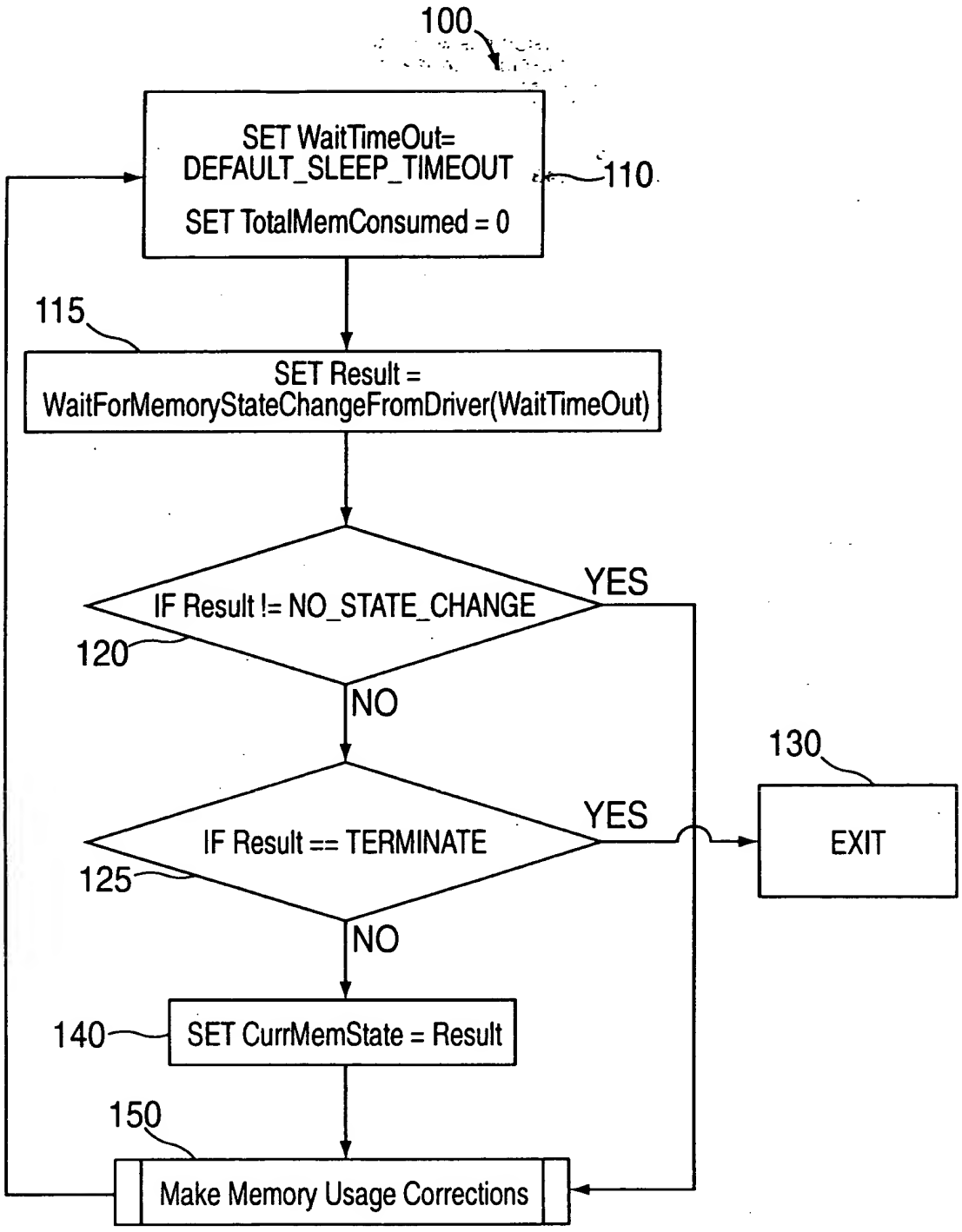
100
SET WaitTimeOut=
DEFAULT_SLEEP_TIMEOUT
SET TotalMemConsumed = 0
110
115
SET Result =
WaitForMemoryStateChangeFromDriver(WaitTimeOut)
IF Result != NO_STATE_CHANGE
120
YES
NO
IF Result == TERMINATE
125
YES
NO
130
EXIT
140
SET CurrMemState = Result
150
Make Memory Usage Corrections

FIG. 2(a)

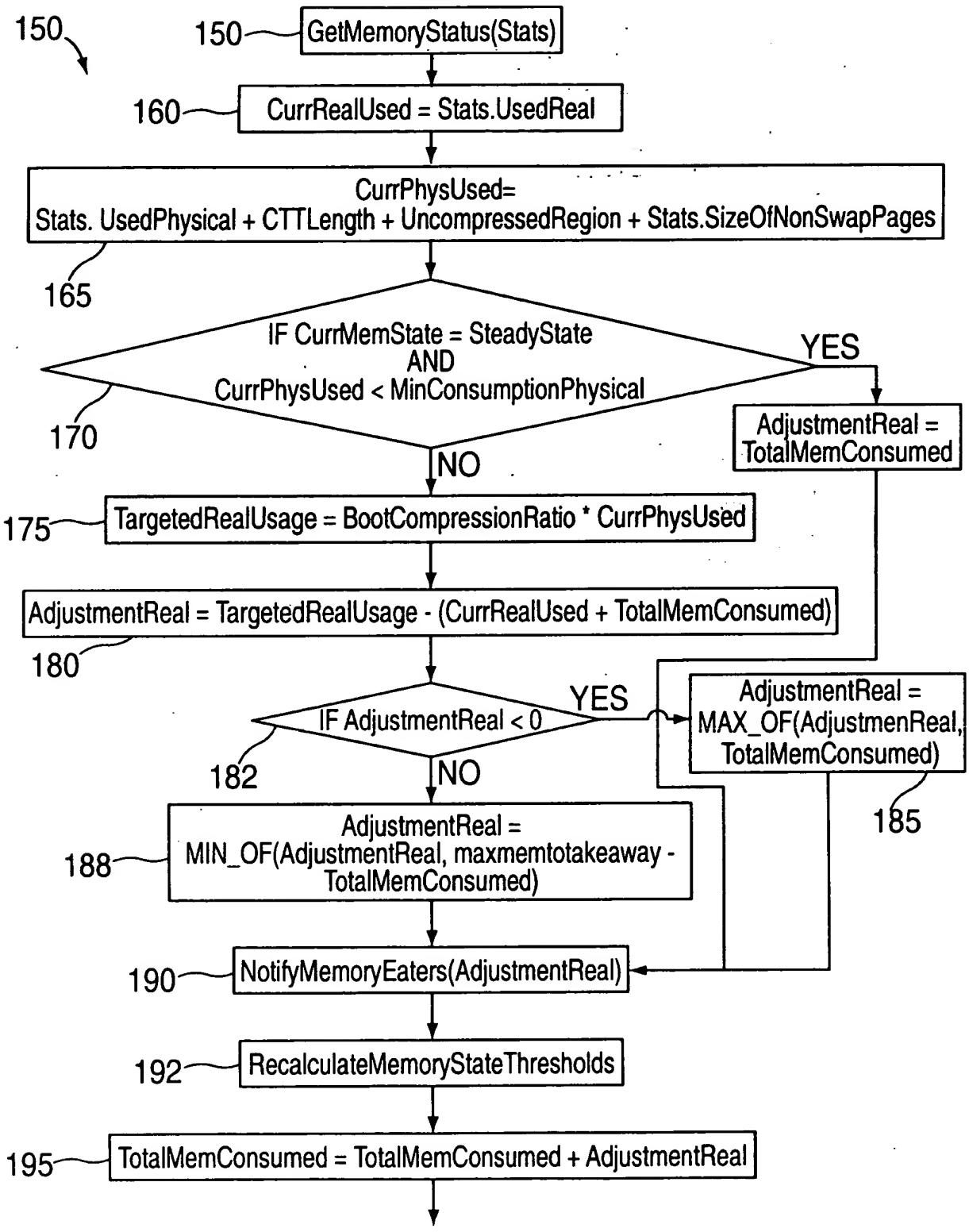
150
150
GetMemoryStatus(Stats)
160
CurrRealUsed = Stats.UsedReal
CurrPhysUsed=
Stats. UsedPhysical + CTTLength + UncompressedRegion + Stats.SizeOfNonSwapPages
165
IF CurrMemState = SteadyState
AND
CurrPhysUsed < MinConsumptionPhysical
YES
170
NO
AdjustmentReal =
TotalMemConsumed
175
TargetedRealUsage = BootCompressionRatio * CurrPhysUsed
AdjustmentReal = TargetedRealUsage - (CurrRealUsed + TotalMemConsumed)
180
IF AdjustmentReal < 0
YES
182
NO
AdjustmentReal =
MAX_OF(AdjustmenReal,
TotalMemConsumed)
185
AdjustmentReal =
MIN_OF(AdjustmentReal, maxmemtotakeaway -
TotalMemConsumed)
188
190
NotifyMemoryEaters(AdjustmentReal)
192
RecalculateMemoryStateThresholds
195
TotalMemConsumed = TotalMemConsumed + AdjustmentReal

FIG. 2(b)